TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2017-05-23-03** **Date: 25-05-17**

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to RCC drains and CC roads at Mallasandra in Ward No.13 Mallasandra Shettyhalli Sub Division.

Agency : Technical Manager(West), Karnataka Rural Infrastructure Development Limited, Project Implementation unit, No.280, 59th Cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010

Customer's Reference : BBMP/EE/DD/WO/55/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 23-05-17

Sample ID No : 2017-05-23-03-01

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 25/05/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Concrete	M30	18/05/2017	25/05/2017	150.54 X 150.43 X 150.66	22646	8.165	568.4	25.1	25.1
2	Drain Concrete	M30	18/05/2017	25/05/2017	149.65 X 150.11 X 150.65	22464	8.153	559.4	24.9	
3	Drain Concrete	M30	18/05/2017	25/05/2017	149.65 X 150.65 X 150.54	22545	8.165	572.6	25.4	

Note:
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Prepared by
Harsitha

AE-13

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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Certificate No.: T- 4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2017-05-23-03** **Date: 15-06-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to RCC drains and CC roads at Mallasandra in Ward No.13 Mallasandra Shettyhalli Sub Division.
Agency	:	Technical Manager(West), Karnataka Rural Infrastructure Development Limited, Project Implementation unit, No.280, 59th Cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010
Customer's Reference	:	BBMP/EE/DD/WO/55/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	23-05-17
Sample ID No	:	2017-05-23-03-02
Customer ID	:	Drain Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test	:	15/06/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Concrete	M30	18/05/2017	15/06/2017	151.02 X 150.71 X 150.87	22760	8.154	760.2	33.4	33.0
2	Drain Concrete	M30	18/05/2017	15/06/2017	150.43 X 149.13 X 150.43	22434	8.143	735.8	32.8	
3	Drain Concrete	M30	18/05/2017	15/06/2017	150.65 X 150.19 X 149.86	22626	8.075	739.9	32.7	

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Prepared by
Harsitha

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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Authorized Signatory
Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2017-05-23-03** **Date: 25-05-17**

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to RCC drains and CC roads at Mallasandra in Ward No.13 Mallasandra Shettyhalli Sub Division.

Agency : Technical Manager(West), Karnataka Rural Infrastructure Development Limited, Project Implementation unit, No.280, 59th Cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010

Customer's Reference : BBMP/EE/DD/WO/55/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 23-05-17

Sample ID No : 2017-05-23-03-03

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 25/05/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Concrete	M30	18/05/2017	25/05/2017	149.88 X 150.54 X 150.32	22563	8.165	559.6	24.8	25.2
2	Drain Concrete	M30	18/05/2017	25/05/2017	149.87 X 150.26 X 150.44	22519	8.115	569.7	25.3	
3	Drain Concrete	M30	18/05/2017	25/05/2017	150.75 X 150.55 X 149.98	22695	8.148	578.7	25.5	

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Prepared by
Harsitha

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2017-05-23-03**

Date: 15-06-17

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to RCC drains and CC roads at Mallasandra in Ward No.13 Mallasandra Shettyhalli Sub Division.

Agency : Technical Manager(West), Karnataka Rural Infrastructure Development Limited, Project Implementation unit, No.280, 59th Cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010

Customer's Reference : BBMP/EE/DD/WO/55/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 23-05-17

Sample ID No : 2017-05-23-03-04

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 15/06/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Concrete	M30	18/05/2017	15/06/2017	150.87 X 149.98 X 150.23	22627	8.165	742.2	32.8	33.3
2	Drain Concrete	M30	18/05/2017	15/06/2017	150.76 X 150.55 X 150.43	22697	8.154	760.3	33.5	
3	Drain Concrete	M30	18/05/2017	15/06/2017	150.53 X 150.18 X 150.43	22607	8.145	761.8	33.7	

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Prepared by
Harsitha

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Authorized Signatory
Quality Manager

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ಮಲ್ಲಸಂದ್ರ ವಾರ್ಡ್ ನಂ.13, ಬೆಂಗಳೂರು

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-04-07** **Date: 06-05-2017**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to RCC drains and CC roads at Mallasandra in Ward No.13 Mallasandra Shettyhalli Sub Division.
Agency	:	Technical Manager(West), Karnataka Rural Infrastructure Development Limited, Project Implementation unit, No.280, 59th Cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010
Customer Reference	:	BBMP/EE/DD/WO/55/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-05-17
Sample ID No	:	2017-05-04-07-02(a)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	04-05-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : **5000** **grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	215	215	4.3	95.7	90-100
3	10 mm	2347	2562	51.2	48.8	25-55
4	4.75 mm	2274	4836	96.7	3.3	0-10
5	Pan	164	5000	100.0	0.0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-04-07** **Date: 06-05-2017**

Sample ID No : 2017-05-04-07-02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	10.8	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	8.5	
3	Specific Gravity	2.61	–
4	Bulk Density(Loose) (Kg/l)	1.49	–
5	Bulk Density(Compacted) (Kg/l)	1.56	–
6	Water Absorption(%)	0.25	–
7	Aggregate crushing Value(%)	22.8	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	20.1	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Prepared by
Harshitha

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Authorized Signature
Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-04-07** **Date: 08-05-2017**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to RCC drains and CC roads at Mallasandra in Ward No.13 Mallasandra Shettyhalli Sub Division.
Agency	:	Technical Manager(West), Karnataka Rural Infrastructure Development Limited, Project Implementation unit, No.280, 59th Cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010
Customer's Reference	:	BBMP/EE/DD/WO/55/2017-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	04-05-17
Sample ID No	:	2017-05-04-07-02(b)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	04-05-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	145	145	1.0	99.0	90-100
3	20 mm	7145	7290	48.6	51.4	30-70
4	10 mm	5278	12568	83.8	16.2	10-35
5	4.75 mm	2074	14642	97.6	2.4	0-5
6	Pan	358	15000	100.0	0	

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-04-07** **Date: 08-05-2017**

Sample ID No : 2017-05-04-07-02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.8	
3	Specific Gravity	2.61	–
4	Bulk Density(Loose) (Kg/l)	1.47	–
5	Bulk Density(Compacted) (Kg/l)	1.52	–
6	Water Absorption(%)	0.21	–

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Prepared by
Harshitha

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